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BEET LEAFHOPPER CONDITIONS IN THE SOUTHERN DESERT AREAS OF SOUTHERN UTAH
AND NEVADA, SOUTHEASTERN CALIFORNIA, AND CENTRAL ARIZONA - 1961

The beet leafhopper spring movement from the southern desert breeding areas to the cultivated districts of central Arizona and southeastern California is expected to be light; the movement to southern Nevada and southern Utah is expected to be light to moderate; and the movement to central and northern Utah and western Colorado is expected to be light. It should be emphasized, however, that this report concerns only the beet leafhopper populations present in the far southern desert breeding grounds and does not have reference to populations that may be in local breeding areas in northern and eastern Utah, in western Colorado, and in western Nevada.

TIME OF MOVEMENT

It is to be understood that this statement is based on present conditions. Movement of the leafhopper into cultivated areas of central and southern Arizona and southeastern California is expected to start by late February to early March; movement to cultivated areas of southern Nevada and southern Utah is expected to start by late March or early April; and movement to central Utah and western Colorado is expected to start by late April. Weather conditions during the next two months will have a bearing on the amount of leafhopper population that moves from the desert areas to cultivated districts.

SOUTHERN DESERT BREEDING GROUND CONDITIONS

Beet leafhopper movement is expected to be light this year from most of the desert regions lying south of the 34 degree parallel and is expected to be light to moderate from those to the north of the 34 degree parallel. Plant cover is favorable for leafhopper buildup in many parts of the area lying to the north of the 34 degree parallel, but is considerably less favorable than last season in most parts of the area lying south of this line. Chemical control used on leafhopper populations in desert areas of the Imperial Valley of California may have effectively reduced a potential migration into croplands of that area. The southern desert breeding grounds are considered to contain about 50,000 square miles of potential annual weed host area, of which an estimated 17,000 square miles showed widespread plant growth at the time of the February survey this season. Host plants were found at 34 percent of the 10-mile sampling points during the February survey in 1961, in comparison to 53 percent in 1960, 10 percent

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in 1959, 70 percent in 1958, and 14 percent in 1957. The average number of leafhoppers found in areas where plants were present in the southern desert breeding grounds is 0.02 per square foot in 1961, as compared to 0.014 in 1960, 0.05 in 1959, and 0.66 in 1958.

SUMMARY

From data obtained it is estimated that the beet leafhopper population in the southern desert breeding grounds was about 6.3 billion at the time of the February survey in 1961, in comparison to 8.6 billion in 1960, 3.0 billion in 1959, 235 billion in 1958, and 5.3 billion in 1957. In 1959 and 1957 light curly top damage occurred to susceptible crops in cultivated areas. In 1960 light to moderate curly top damage occurred in cultivated areas with some severe damage in western Colorado, possibly due to late rains south of the 34 degree parallel, which helped to sustain weed hosts allowing additional leafhoppers to reach maturity for migration into that area.

